DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-026596
Date Inspected: 28-Oct-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 600
OSM Departure Time: 1430
Location: Job Site

CWI Name:	See Below		**CWI Present:**	☑ Yes	☐ No
Inspected CWI report:	☐ Yes	☑ No ☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No ☐ N/A
Electrode to specification:	☑ Yes	☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No ☐ N/A
Qualified Welders:	☑ Yes	☐ No ☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No ☐ N/A
Approved Drawings:	☑ Yes	☐ No ☐ N/A	**Approved WPS:**	☑ Yes	☐ No ☐ N/A
			Delayed / Cancelled:	☐ Yes	☑ No ☐ N/A

Bridge No: 34-0006
Component: OBG

Summary of Items Observed:

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the SAS project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) personnel. The inspection was performed as noted below:

A). This Quality Assurance Lead Inspector (QALI) assigned to the QAI, Douglas Frey, to the following, but not limited to, work stations:

OBG W12/13W
Lifting Lug Holes (LLH)

1). The QAI, Doug Frey, observed the Complete Joint Penetration (CJP) groove welding of the side plate field splice identified as 12W-13W-E. The welding was performed by the welder Rory Hogan ID-3186 utilizing the Flux Cored Arc Welding w/gas (FCAW-G) process as per the Welding Procedure Specification (WPS) ABF-WPS-D15-3110-4, Rev. 0. The QC inspector, John Pagliero, performed the inspection and verified the welding parameters utilizing the WPS as a reference. No issues were noted by the QA inspector at the time of random observations. The welding of "A" Face performed at this work station was completed during this shift on this date.

The QAI also observed the welder Jeremy Dolman ID-5042 removing the backing bar utilizing the Plasma Arc Cutting (PAC) process of the weld joint identified as 12W-13W-D. Due to mechanical and electrical issues with the Bug-O mortorized tractor, Mr.Dolman made alterations and converted the semi-automatic to a manual operation.

2). Later in the shift the QAI observed the welder, Mr. Lopez, had mobilized to the Orthotropic Box Girder (OBG) W11 to set-up and to perform the CJP welding of the LLH identified as 11W-PP100-W4-W4. The field welding was performed utilizing the WPS ABF-WPS-D15-1050A-CU and was also utilized by the QC inspector, Patrick Swain, to monitor the welding and verifiy the welding parameters.

B). This Quality Assurance Lead Inspector (QALI) assigned to the QAI, Craig Hager, to the following, but not limited to, work stations:

OBG 13E/14E

1). The QAI, Mr. Hager, observed the welder James Zhen ID-6001 perparing and setting up the welding equipment in preparation to commence the CJP welding of the bottom plate field splice identified as 13E-14E-D2. The QC inspector, Fred Von Hoff, informed the QAI that the Visual Testing (VT) and the Magnetic Particle Testing (MPT) had been performed on the back gouged surface of this weld joint.

C). This Quality Assurance Lead Inspector (QALI) assigned to the QAI, Art Peterson, to the following, but not limited to, work stations:

OBG E11/E12
OBG W12/W13

1). The QAI, Art Peterson, observed the preliminary Ultrasonic Testing (UT) performed by Patrick Swain on the deck plate field splice identified as 11E-12E segment A5. At the conclusion of the testing no rejectable discontinuities was noted by the QC technician.

2). The QAI also observed the fit-up and alignment of the longitudinal stiffener identified as 12W-13W-A-LS6. The fit-up of the longitudinal stiffener was completed and the welding operation commence at this time. The welding was performed by Fred Kaddu ID-2188 utilizing the Shielded Metal Arc Welding (SMAW) process as per the WPS identified as ABF-WPS-D15-1012-3, Rev. 0. The WPS was also utilized by the QC Inspector William Sherwood as a reference. The welding of this joint was not completed during this shift.

D). This Quality Assurance Lead Inspector (QALI) assigned to the QAI, Joselito Lizardo, to the following, but not limited to, work stations:

Lifting Lug Holes (LLH)
QA Verification
Temporary Storm Ties

1). The QAI observed the CJP welding of the LLH located at OBG E11 and identified as11E-PP100-W4-W4. The welding was performed by the welder, Jorge Lopez ID-6149, in the 1G (flat) position utilizing the Shielded Metal Arc Welding (SMAW) process as per the WPS identified as ABF-WPS-D15-1050A-CU. The QAI observed the QC Inspector, Sal Merino, monitor the welding and verified the welding parameters utilizing the WPS as a reference.

2). Also, at the request of the QC Lead Inspector, Bonbifacio Daquinag, Jr., Mr. Lizardo performed aVisual Test (VT) and a Magnetic Particle Test (MPT) of the LLH identified as 11E-PP100-E3-W1 & W2 and

11EPP104-E3-W1 & W2. Approximately 10% was tested to verify the weld and the testing performed by QC meet the requirements of the contract Specifications. No issues were noted by the QAI at the time of testing.

3). Later in the shift, the QAI, observed the fillet welding of the temporary storm ties located at the following areas of the east and west "A" deck; 4E-PP29-E5, 4E-PP30-E5, 4W-PP29-W5 and 4WPP30-W5. The welding was performed by Rick Clayborn ID-2773 utilizing the Flux Cored Arc Welding/self shielded (FCAW-SS) process as per the WPS identified as ABF-WPS-F2200-2, Rev. 0. The QC inspection was performed by Jesse Cayabyab utilizing the WPS as a reference. The welding of the storm ties were completed during this shift.

Quality Assurance Lead Inspector (QALI) Summary

Later in the shift, this QA Lead Inspector (QALI) also observed the QA Inspector's Doug Frey, Craig Hager, Joselito Lizardo and Art Peterson monitor the work performed by the QC inspectors at random intervals and also observed the QA Inspectors verify the welding parameters, the minimum preheat and the maximum interpass temperatures. The QAI's utilized a Fluke 337 clamp meter to measure the electrical welding parameters, Tempil Heat Indicators and/or a Fluke 63 IR Thermometer for verifying the preheat and interpass temperatures. At the conclusion of the shift this QA Lead Inspector discussed and reviewed the work performed by the QAI's in regards to the various observations and the verifications of the WPS's, consumables, welding parameters, preheat and interpass temperatures as described above. The QAI observations of the QC inspection and verification of the welding parameters performed on this date appeared to comply with the contract specifications with no issues noted.

For additional detailed information see the individual submitted and approved QAI Weld Inspection Reports (WIR).

This report was generated upon the discussions with the QA Inspectors, random visual observations and review of the QAI field reports.

Review of QA Tracking Plan

This QA Inspector continued the daily review of field inspection reports and update of the field document control tracking records regarding the Orthotropic Box Girders (OBG, Longitudinal and Transverse "A" Deck Stiffeners, Deck Access Holes and the Tower Shear plates. The QAI also updated the tracking records for the pipe welds and the pipe supports.

Summary of Conversations:

There were general conversations with Quality Control Lead Inspector, Bonifacio Daquinag, Jr., at the start of the shift regarding the location of welding, inspection personnel scheduled for this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

WELDING INSPECTION REPORT

(Continued Page 4 of 4)

Inspected By:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer